Winter Operations

Preparing for Winter

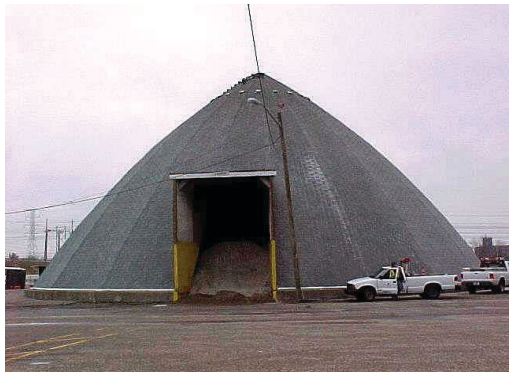
Each September and October, all 120 INDOT maintenance units across Indiana are inspected to ensure they are prepared to combat snow and ice on the highways.

INDOT maintains more than 1,100 trucks in its fleet to clear more than 11,000 center lane miles of state roadways. The entire fleet of trucks and plows are inspected and the inventories of salt and magnesium chloride are taken to guarantee that all units are ready to be deployed at the first sign of snow or ice.

INDOT has more than 134 salt domes or storage buildings. They range in size from a 400-ton capacity to a 7,600-ton capacity. Their cost can range from $250,000 to $450,000. INDOT fills these domes with approximately 295,000 tons of salt each year statewide.

When Inclement Weather Hits

INDOT faces many challenges during winter storms. Rapidly changing weather conditions during the winter are monitored by INDOT through the use of satellite technology, ensuring that the assault on snow and ice are well underway before snow hits the ground. Sensors in the pavement communicate data about a road's surface temperature, allowing INDOT to treat the highway before its temperature drops below the critical 32-degree mark.



A crew at the Indianapolis Subdistrict prepares to check salt supplies.

Materials

INDOT drivers are on the roadway before, during and after the storm until highways are clear. Snow routes usually take two to three hours to clear, even with the best removal equipment.

Rock salt is the most widely used de-icing agent in the U.S. because of it cost and effectiveness. When the temperature is above 25 degrees, salt can melt several inches of snow and prevent or reduce the bonding of compacted snow to the pavement surface.

Salt is less effective at temperatures below 25 degrees and/or when traffic volumes are too light to activate the chemicals. For lower temperatures, a ratio of nine gallons of calcium chloride to every ton of salt is used to treat the pavement.

Usage by District

Indiana has a wide variance of the amount of salt necessary to combat winter weather. In the northern third of the state, INDOT crews battle the "lake effect" snow and lower temperatures.

The map to the right shows how much each district used per year, based on a 10-year average.